

**REMARKS/ARGUMENTS**

This application is under final rejection. Applicant has presented arguments hereinbelow that Applicant believes should render the claims allowable. In the event, however, that the Examiner is not persuaded by Applicant's arguments, Applicant respectfully requests that the Examiner enter the amendment to clarify issues upon appeal.

This Amendment is in response to the Final Office Action dated April 4, 2005. Claims 1, 5-7, 15, 17-18, and 22-23 are pending in the present application. No claims have been amended, added, or canceled. Accordingly, claims 1, 5-7, 15, 17-18, and 22-23 remain pending in the present applications.

Claims 1, 5-7, 15, 17-18, and 22-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Arima et al (6,479,758).

Applicant respectfully disagrees. Applicant has reproduced the Fig. 1 of Arima with numerical references used by the Examiner as well as additional references corresponding to the Applicant's arguments as set forth below.

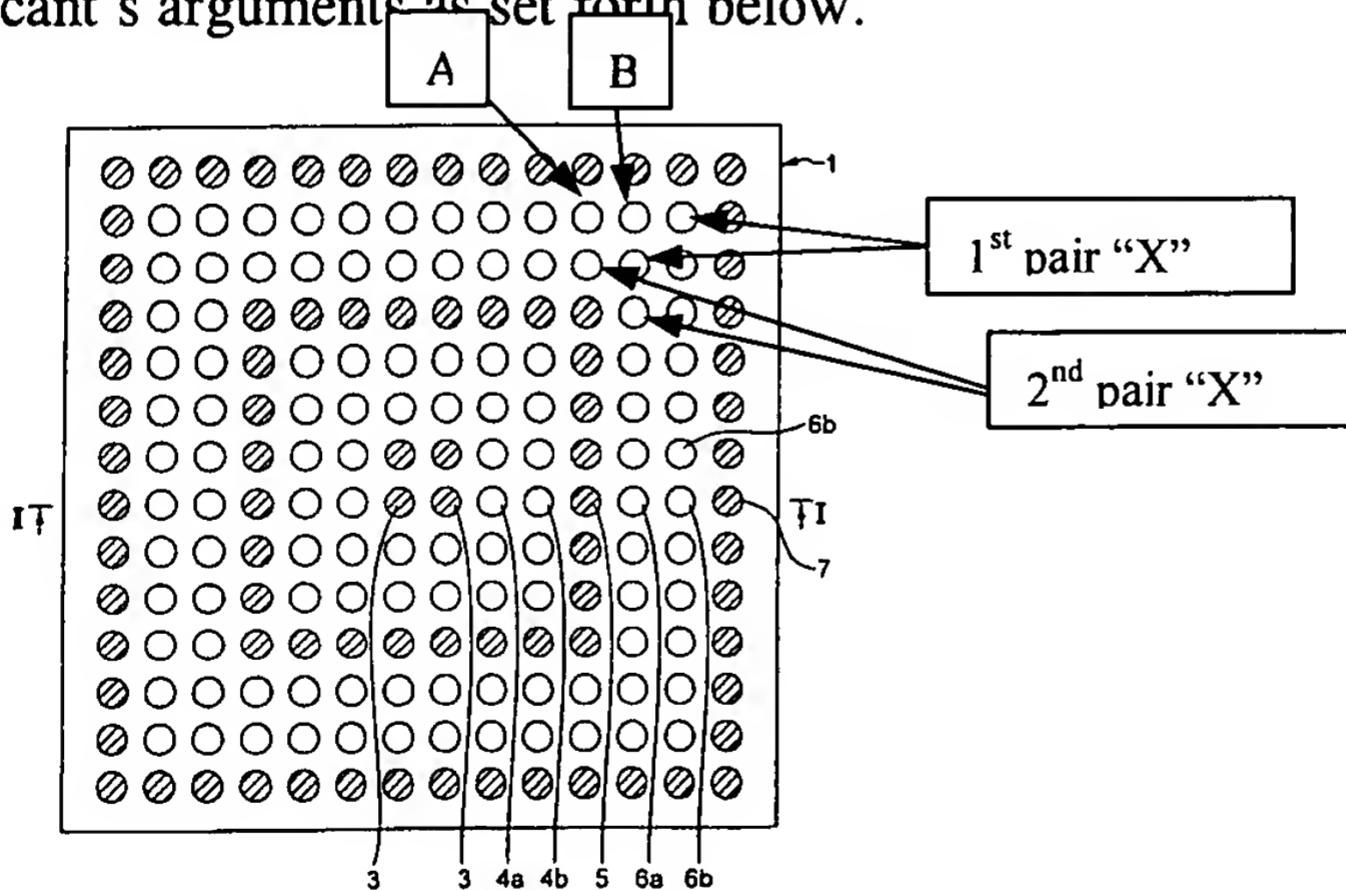


FIG. 1

In accordance with the present invention, a layer of a carrier or the chip package comprises a plurality of pairs of conductors, where each pair of conductors in the layer is

positioned so that adjacent pairs of conductors affect each other evenly, where cross-talk between adjacent pairs of conductors is substantially minimized without increasing a size of the package.

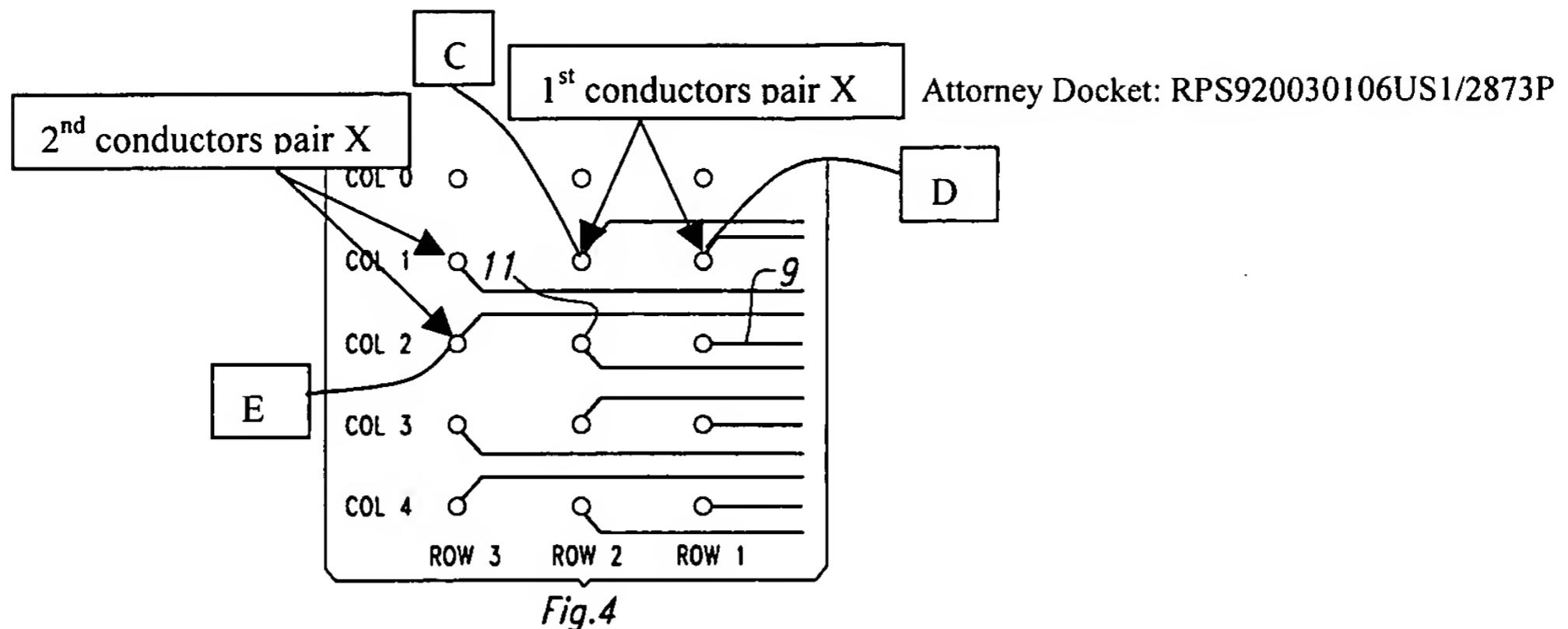
The Examiner points to conductor pairs labeled “1<sup>st</sup> pair X” and “2<sup>nd</sup> pair X” in the Office Action in Fig. 1 of Arima as being positioned to be orthogonal and equidistant to each other. However, unlike the present invention, not *each* pair of conductors in the layer disclosed in Arima is so positioned. Rather, the positions of the conductors in Arima is more analogous to the prior art positioning set forth in Figures 2A and 2B of the specification, where some adjacent pairs affect each other unevenly.

For example, the conductors A and B in Fig. 1 of Arima (see above) makes up another pair of conductors. Although conductor B may affect the two conductors of the first pair evenly, conductor A does not since it is not equidistant from both conductors of the first pair. The same is true between conductors A and B and the second pair. Thus, in Arima not *each* pair of conductors in the layer as positioned so that adjacent pairs of conductors affect each other evenly, as recited in the pending independent claims.

Thus, Arima does not teach or suggest the plurality of pairs of conductors where each pair of conductors in the layer is positioned so that adjacent pairs of conductors affect each other evenly, as recited in amended independent claims 1, 15, and 18.

Claims 1, 5, 15, 18, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Stearns et al (6,215,184).

Applicant respectfully disagrees. Applicant has reproduced the Examiner’s Fig. 4 of Sterns with additional numerical references corresponding to the Applicant’s arguments as set forth below.



The Examiner points to conductor pairs labeled “1<sup>st</sup> conductors pair X” and “2<sup>nd</sup> conductors pair X” in the Office Action in Fig. 4 of Stearns as being orthogonal to each other. However, unlike the present invention, not *each* pair of conductors in the layer disclosed in Stearns is so positioned. For example, the distance of conductor E of the 2<sup>nd</sup> conductors pair is from conductor C of the 1<sup>st</sup> conductors pair is not the same as its distance from the conductor D of the 1<sup>st</sup> conductors pair. The same is true for the distance of conductor F of the 2<sup>nd</sup> conductors pair from conductors C and D of the 1<sup>st</sup> conductors pair. Thus, the 1<sup>st</sup> and 2<sup>nd</sup> conductors pairs affect each other unevenly.

Thus, Stearns does not teach or suggest the plurality of pairs of conductors where each pair of conductors in the layer is positioned so that adjacent pairs of conductors affect each other evenly, as recited in amended independent claims 1, 15, and 18.

Claims 1, 7, 15, 18 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (6,657,310).

Applicant respectfully disagrees. The Examiner points to conductor pairs labeled “1<sup>st</sup> pair of conductors” and “2<sup>nd</sup> pair conductors” in the Office Action in Fig. 10 of Lin as being orthogonal to each other. However, unlike the present invention, not *each* pair of conductors in the layer disclosed in Lin is so positioned. For example, the distance of conductor 103 of the 2<sup>nd</sup> pair from conductor 101 of the 1<sup>st</sup> pair is not the same as its distance from conductor 101 of the

1<sup>st</sup> pair. The same is true for the distance of conductor 104 of the 2<sup>nd</sup> conductors pair from conductors 101 and 102 of the 1<sup>st</sup> conductors pair. Thus, the 1<sup>st</sup> and 2<sup>nd</sup> pairs of conductors affect each other unevenly.

Therefore, for the above identified reasons, the present invention as recited in amended independent claims 1, 15, and 18 is neither taught nor suggested by the cited references. Applicant further submits that claims 5-7, 17, and 22-23 are also allowable because they depend on the above allowable base claims.

In view of the foregoing, Applicant submits that claims 1, 5-7, 15, 17-18, and 22-23 are patentable over the cited references. Applicant, therefore, respectfully requests reconsideration and allowance of the claims as now presented.

The prior art made of record and not relied upon has been reviewed and does not appear to be any more relevant than the applied references.

Applicants' attorney believes this application in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicants' attorney at the telephone number indicated below.

Respectfully submitted,  
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Date

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